

**Notice of Allowability**

Application No.

10/716,990

Applicant(s)

KOMMA ET AL.

Examiner

Art Unit

Arnel C. Lavarias

2872

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/13/06, 10/31/06.
2. ☒ The allowed claim(s) is/are 1-39, 42-45 (renumbered 1-43).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20070110.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>11/13/06, 10/31/06</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                             | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Terminal Disclaimer***

1. The terminal disclaimer filed on 10/31/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/789309 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Information Disclosure Statement***

2. The documents '2003/227858' and '2004/170106', listed in the 'U.S. Patent Documents' section of PTO-1449 filed 10/31/06, has been lined through, as these documents were previously listed in the PTO-892 dated 7/31/06 and have already been considered.

### ***Drawings***

3. The replacement drawings were received on 10/31/06. These drawings are objected to for the following reason(s) as set forth below.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figures 2, 5, 7, 10, 13, 14- Reference numeral 34 (not all instances of '34' were removed in the replacement drawings submitted 10/31/06).

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Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Response to Amendment***

5. The amendments to the specification of the disclosure in the submission dated 10/31/06 are acknowledged and accepted.
6. The amendments to Claims 1-2 in the submission dated 10/31/06 are acknowledged and accepted.
7. The cancellation of Claims 40-41 in the submission dated 10/31/06 is acknowledged and accepted.

***Response to Arguments***

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8. In view of the submission of a terminal disclaimer above, the rejections of Claims 1-2, 16-17, 21, 25-27, 30, 40, 42 in Section 11 of the Office Action dated 10/31/05 are respectfully withdrawn.
9. In view of the amendments made to the claims above, the rejections of Claim 40 in Sections 12-13, 15-17 of the Office Action dated 10/31/05 are respectfully withdrawn.
10. The Applicants' arguments, see in particular Pages 16-17 of the response, filed 10/31/06, with respect to the rejections of Claims 1-3, 42 in Sections 19-20 of the Office Action dated 10/31/05, have been fully considered and are persuasive. The rejections of Claims 1-3, 42 in Sections 19-20 of the Office Action dated 10/31/05 have been withdrawn.

*Allowable Subject Matter*

11. Claims 1-39, 42-45 are allowed.
12. Claims 1 and 2 are allowable. Claims 4, 6-15, 31-36, 38, 43, previously withdrawn from consideration as a result of a restriction requirement, include all the limitations of an allowable claim. Pursuant to the procedures set forth in MPEP § 821.04(a), **the restriction requirement among Inventions I, II, III, and IV, as set forth in the Office action mailed on 7/25/05, is hereby withdrawn**, and Claims 4, 6-15, 31-36, 38, 43 are hereby rejoined and fully examined for patentability under 37 CFR 1.104. In view of the withdrawal of the restriction requirement, applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be

subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

### REASONS FOR ALLOWANCE

13. The following is an examiner's statement of reasons for allowance:

Claims 1-2 are allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest an optical element or lens designed for two wavelengths of red light and blue light, as generally set forth in Claims 1-2, the element or lens including, in combination with the features recited in Claims 1-2, the phase level difference, wherein a difference in optical path length occurring when the blue light passes through the phase level difference being five times the wavelength of blue light, and a difference in optical path length occurring when the red light passes through the phase level difference being three times the wavelength of red light. Claims 3-15, 38, 42-43 are dependent on Claim 2, and hence are allowable for at least the same reasons Claim 2 is allowable.

Claim 16 is allowable over the cited art of record for at least the reason that the cited art of record fails to teach or reasonably suggest an optical lens, as generally set forth in Claim 16, the lens including, in combination with the features recited in Claim 16, the hologram including a sawtooth shape grating having a sawtooth shape in cross-section, and generating +2<sup>nd</sup> order diffracted light most strongly with respect to blue light and

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generating +1<sup>st</sup> order diffracted light most strongly with respect to red light, by setting a height of the sawtooth shape grating, and a difference in optical path length occurring when the blue light passes through the phase level difference being five times the wavelength of blue light. Claims 17-36, 44 are dependent on Claim 16, and hence are allowable for at least the same reasons Claim 16 is allowable.

Claims 37, 39, 45 are allowable over the cited art of record for at least the reasons as previously set forth in Section 22 of the Office Action dated 10/31/05.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arnel C. Lavarias  
Primary Examiner  
Group Art Unit 2872  
1/10/07

  
ARNEL LAVARIAS  
PRIMARY PATENT EXAMINER



Inventor: KOMMA et al.  
Docket No.: 10873.1356US01  
Title: OPTICAL ELEMENT, OPTICAL LENS, OPTICAL HEAD APPARATUS, OPTICAL INFORMATION APPARATUS, COMPUTER, OPTICAL INFORMATION MEDIUM PLAYER, CAR NAVIGATION SYSTEM, OPTICAL INFORMATION MEDIUM RECORDER, AND OPTICAL INFORMATION MEDIUM SERVER  
Attorney Name: Douglas P. Mueller  
Phone No.: 612.455.3800  
Sheet 1 of 19  
REPLACEMENT SHEET

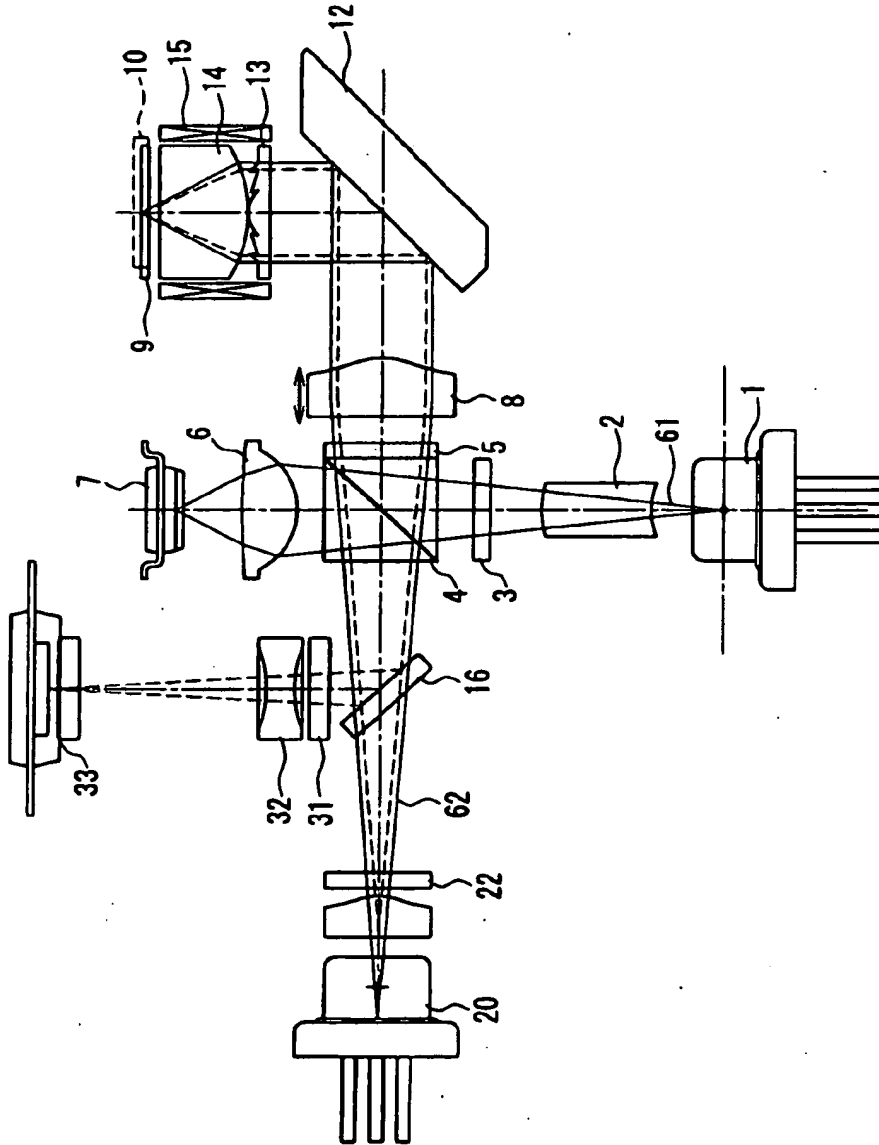


FIG. 1

Drawing Changes  
Approved  
for  
1/9/07



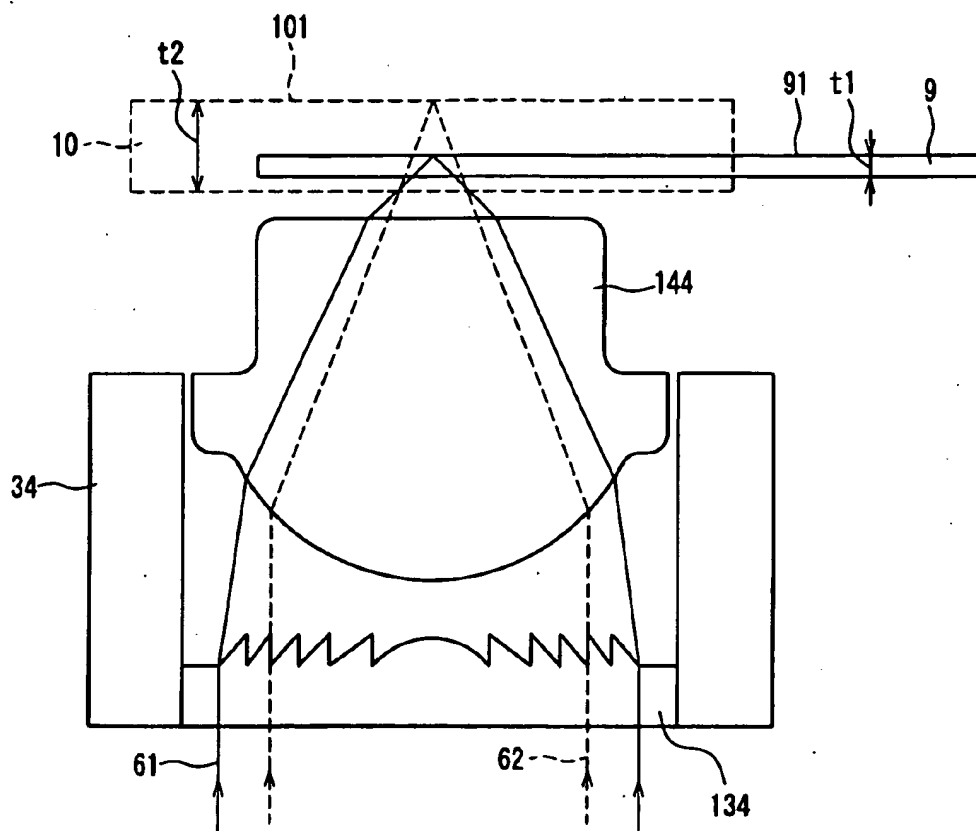


FIG. 2

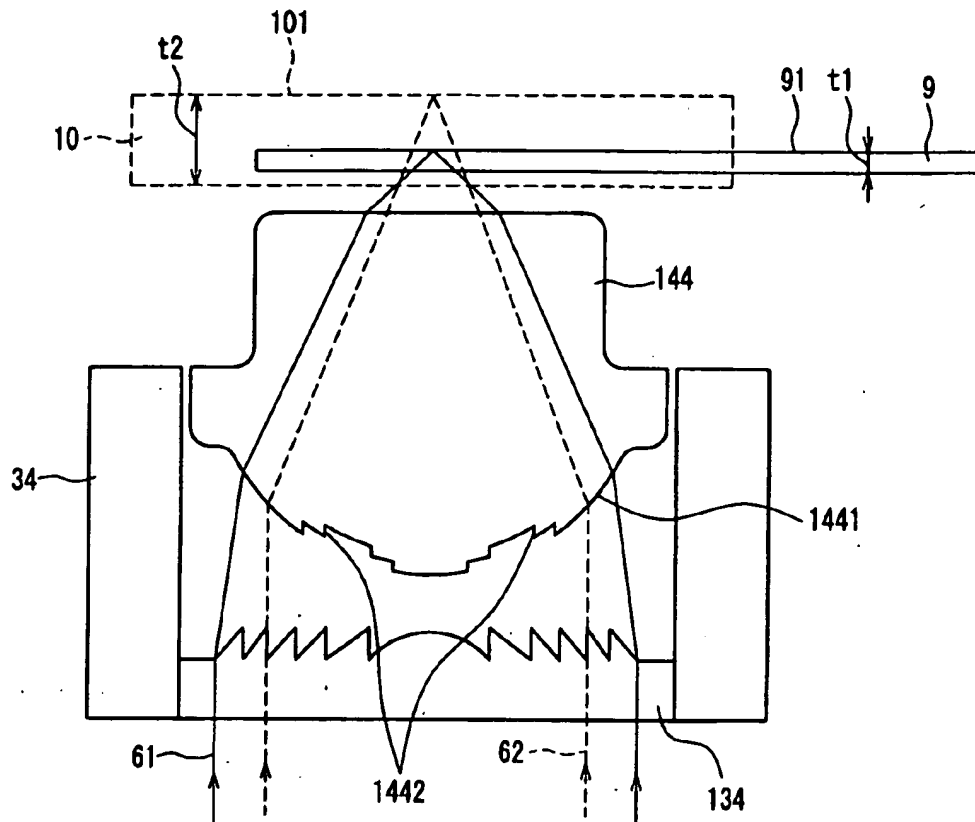


FIG. 5

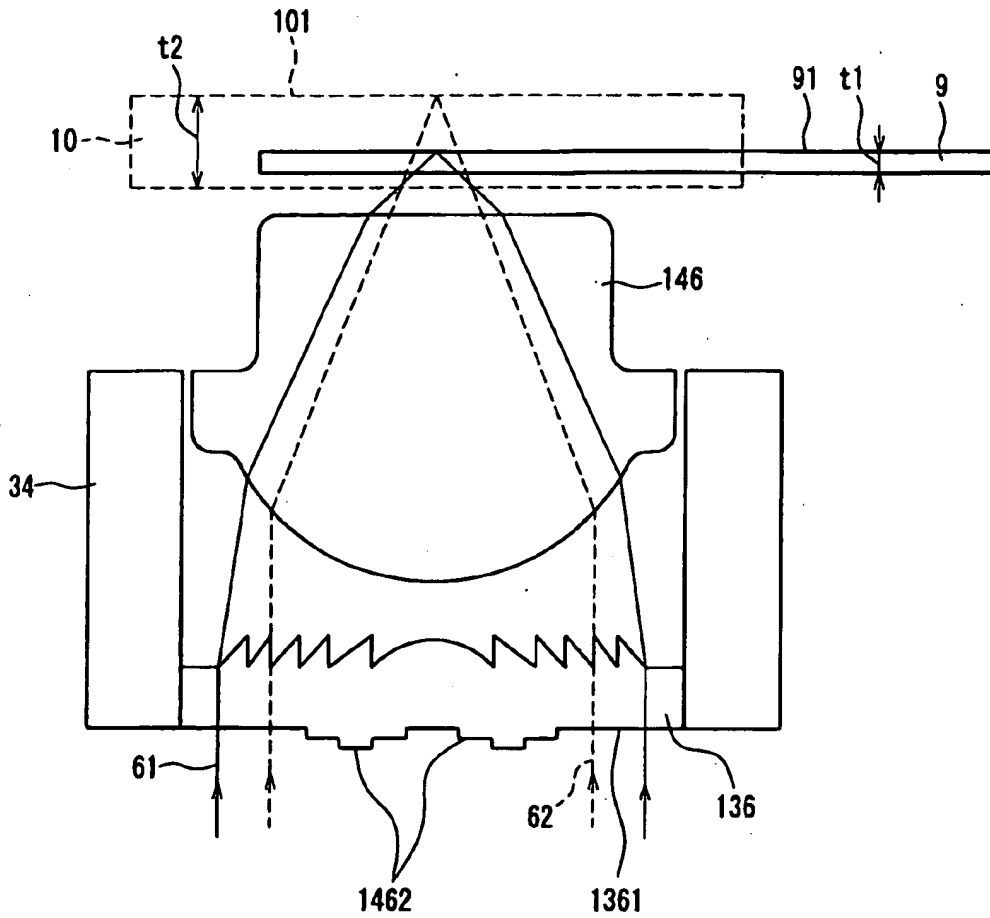


FIG. 7

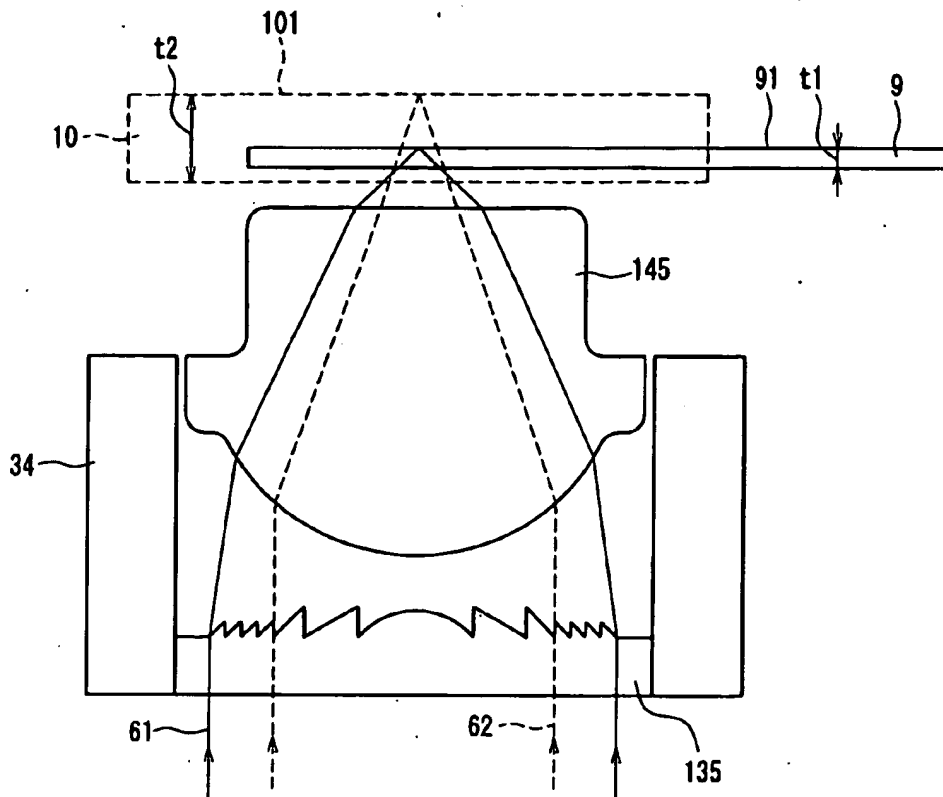


FIG. 10

FIG. 11A

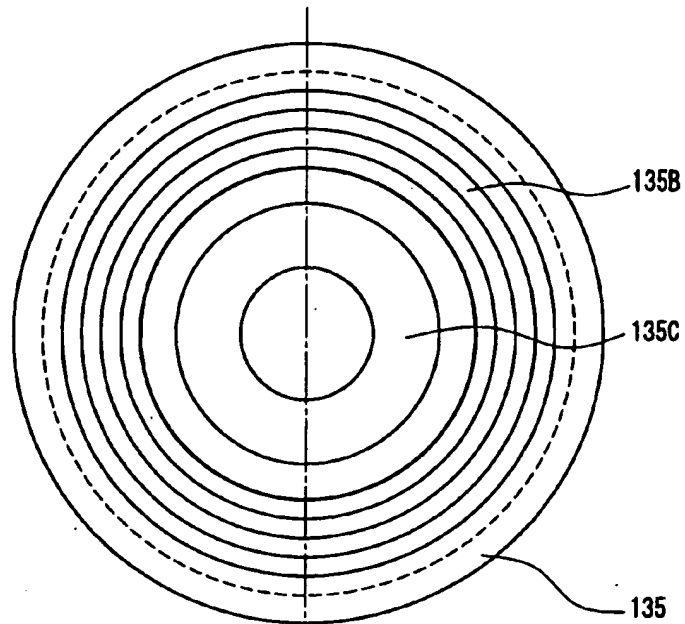
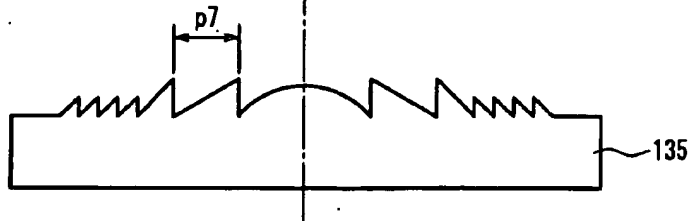


FIG. 11B



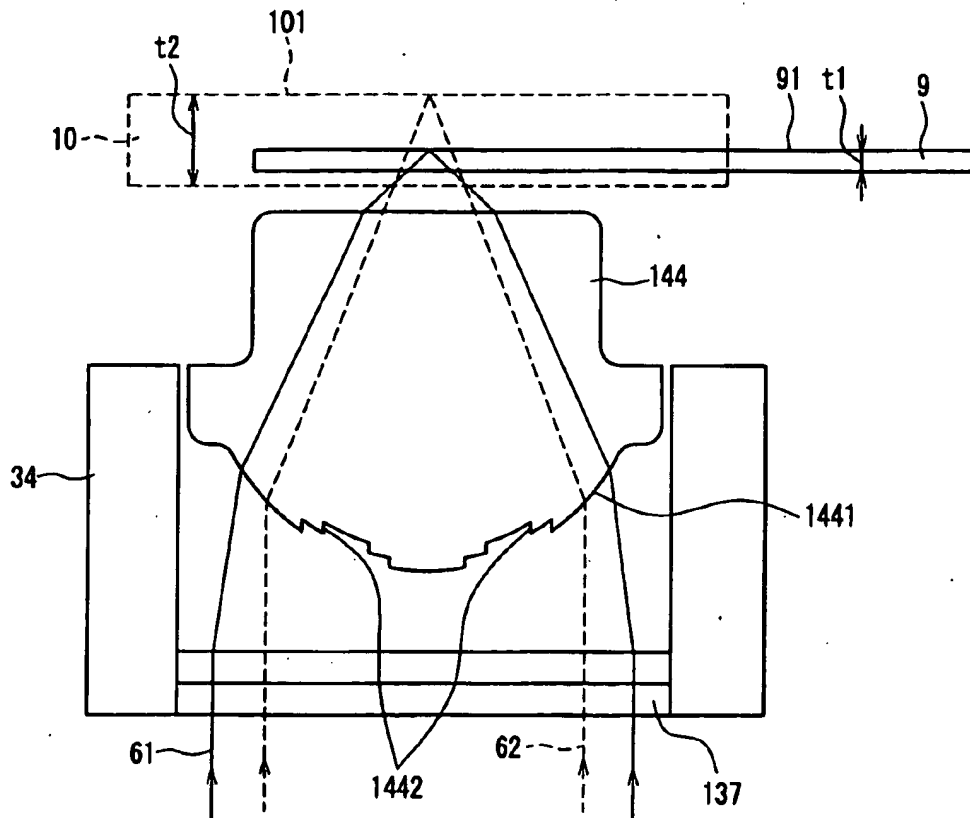


FIG. 13

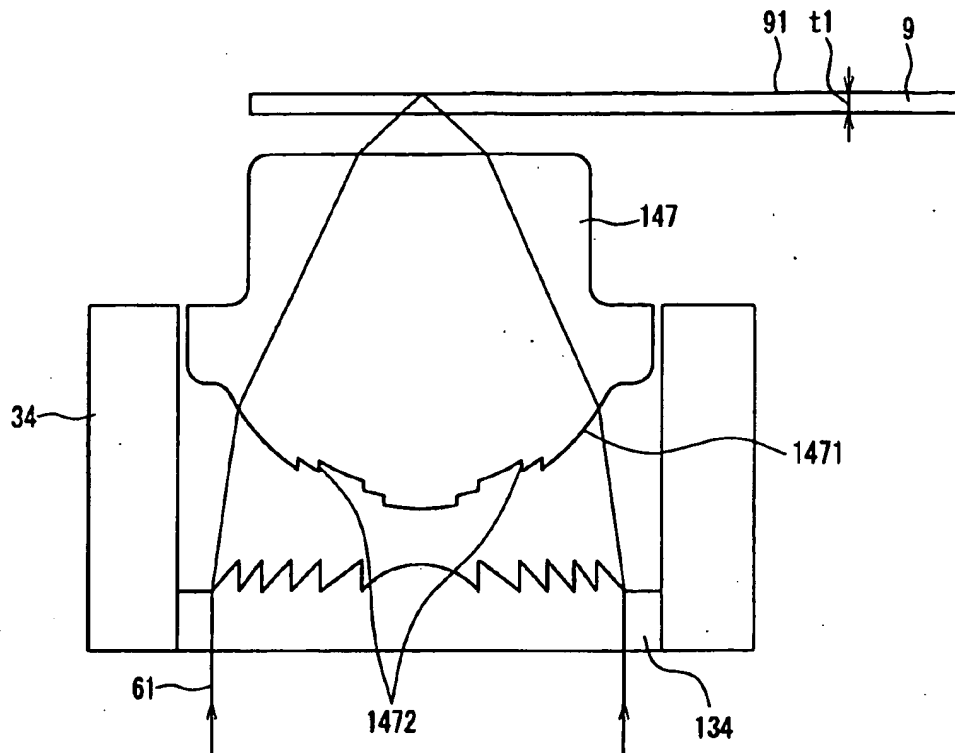
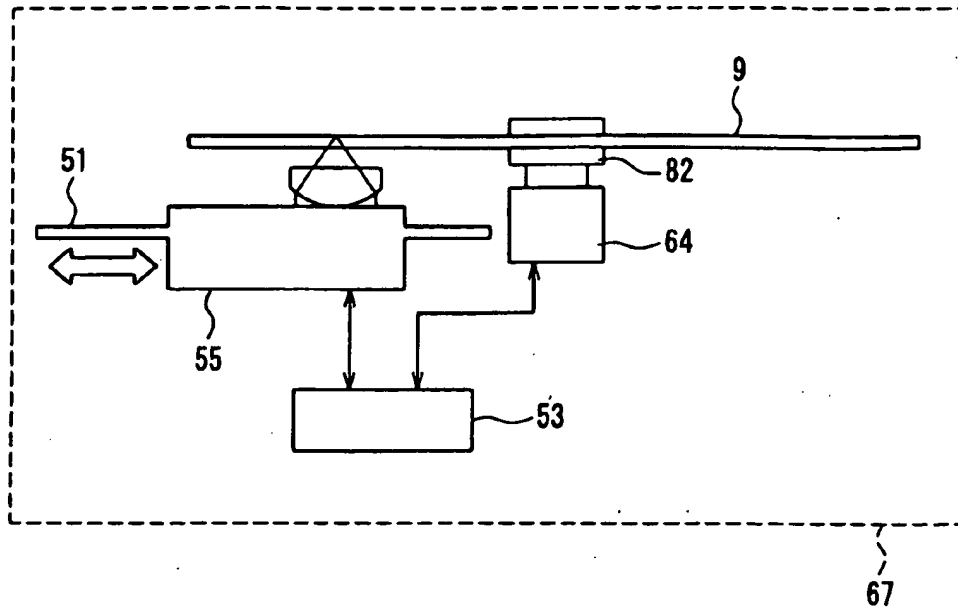


FIG. 14





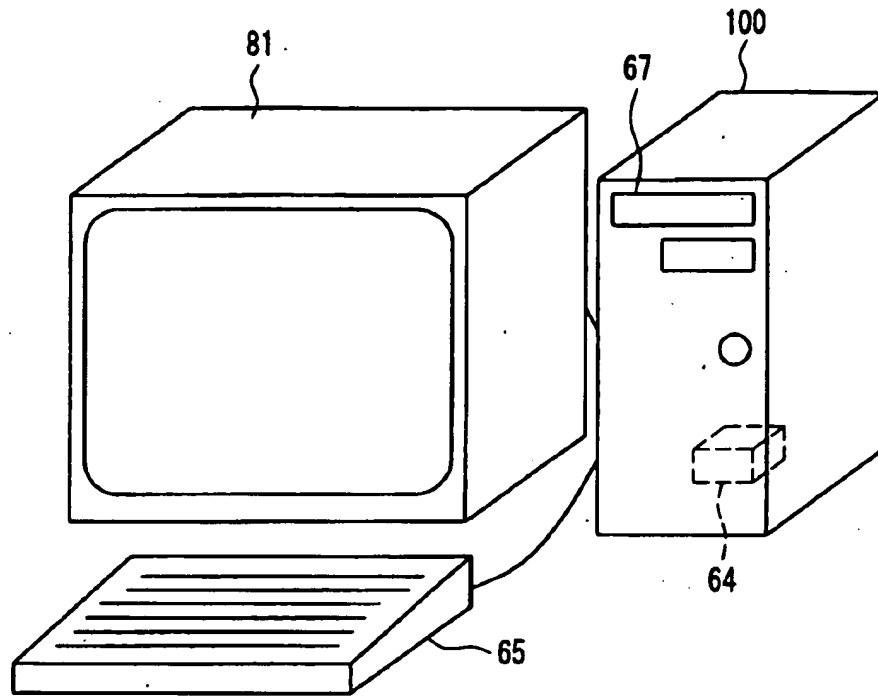


FIG. 16

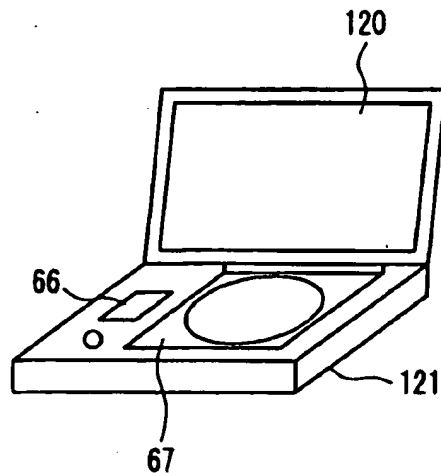


FIG. 17

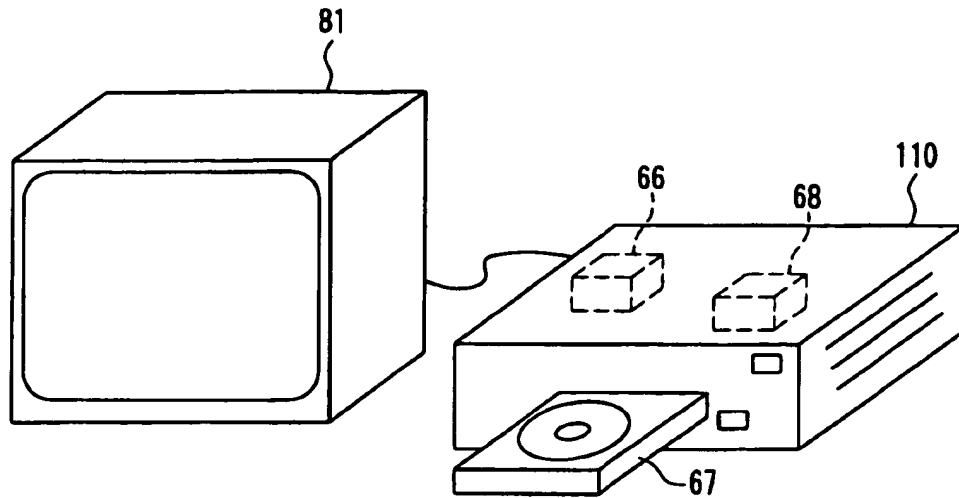


FIG. 18

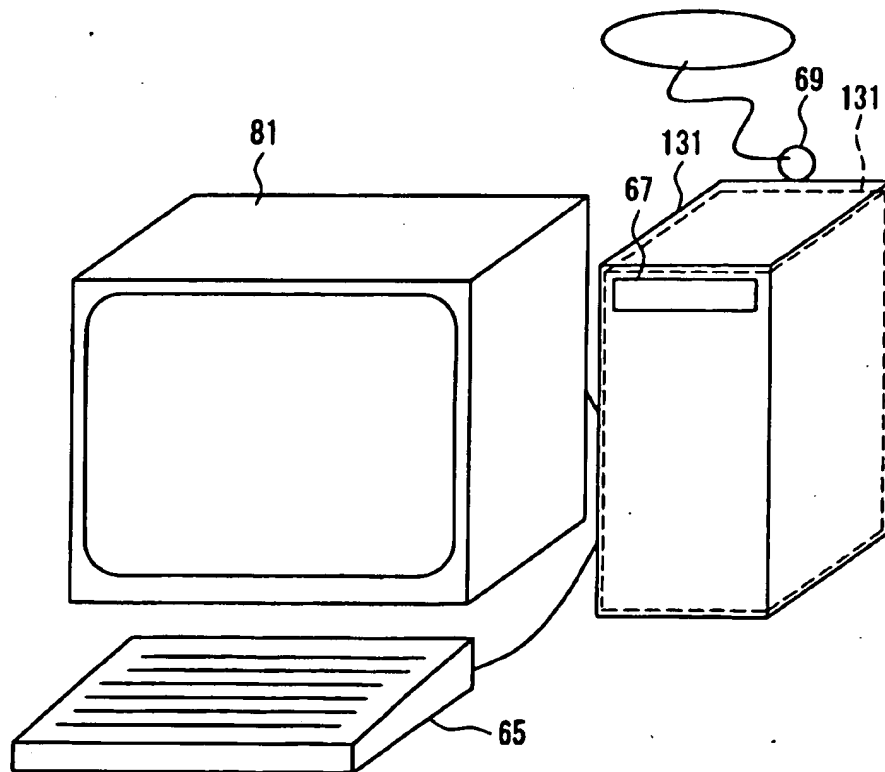


FIG. 19

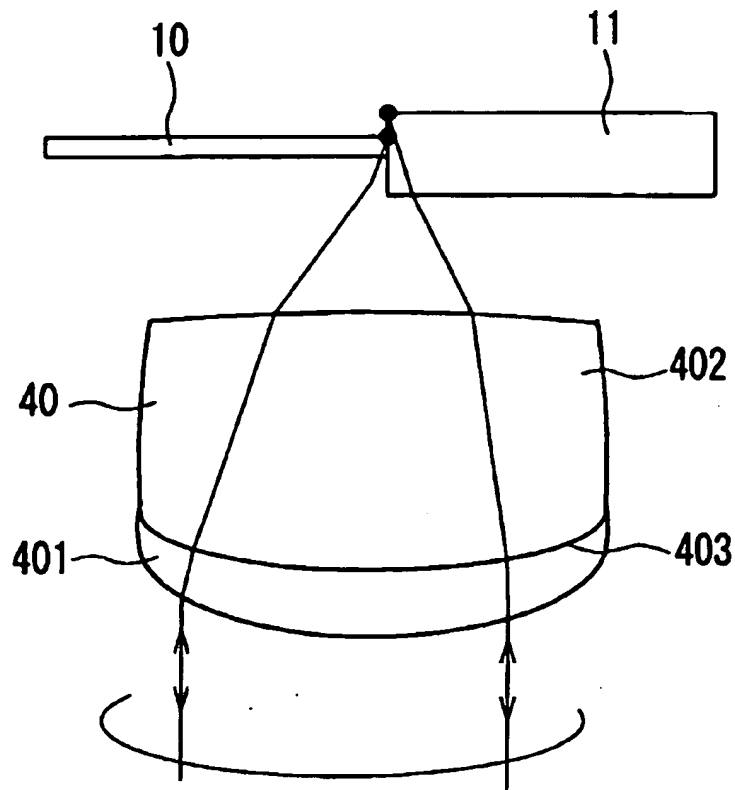


FIG. 20